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## Analytical Paper

Analysis in Brief

# Manufacturing: The Year 2013 in Review

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- .. not available for a specific reference period
- ... not applicable
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- 0<sup>s</sup> value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- P preliminary
- r revised
- x suppressed to meet the confidentiality requirements of the *Statistics Act*
- E use with caution
- F too unreliable to be published
- \* significantly different from reference category ( $p < 0.05$ )

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## *Manufacturing: The Year 2013 in Review*

by Joanne Ellis

### 1 Introduction

Canadian manufacturing sales edged up 0.3% in 2013, largely as a result of gains in the wood, food, aerospace and chemical industries. Those gains were almost fully offset by declines in the primary metal, petroleum and coal, automotive, and fabricated metal manufacturing industries.<sup>1</sup> Manufacturing sales have almost fully recovered from the recession of 2008-2009 and are close to pre-recession levels.<sup>2</sup> By contrast, constant dollar sales fell 0.9% year-over-year as prices rose in 2013. Constant dollar sales in 2013 remained well below pre-recession levels

The small increase in manufacturing sales and drop in volumes are also reflected in a number of manufacturing-related indicators. Of note, gross domestic product for the manufacturing sector was down year-over-year (-0.4%) and remains well below pre-recession levels. Similarly, employment, capacity utilization and operating profits all declined in the sector in 2013. Meanwhile, manufacturing exports<sup>3</sup> rose 1.6%, following successive gains since 2009, and unfilled orders continued their post-recession recovery, up 13.2% over 2012, led by orders for aerospace products and parts.

### 2 Manufacturing sales increase for fourth year in a row

Total Canadian manufacturing sales edged up 0.3% to \$590.4 billion in 2013, following solid advances of 3.4% in 2012, 7.6% in 2011 and 8.4% in 2010. After hitting a 10-year low of \$488.1 billion in 2009, manufacturing sales have been recovering since the last recession with a 21.0% gain from 2009 to 2013. Sales in 2013 were just 1.2% below the pre-recession level of 2007. This indicates that current dollar manufacturing sales have almost fully recovered from the recession.

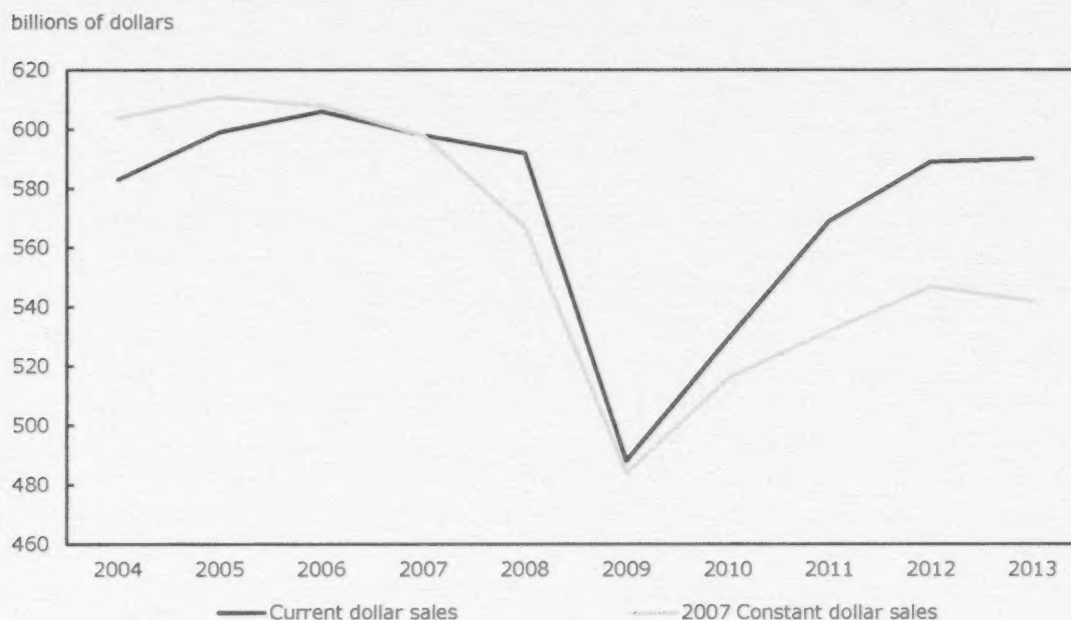
In constant dollar terms, total manufacturing sales fell by 0.9% in 2013, 9.2% below the pre-recession level of 2007. There has been a growing divergence between current and constant dollar sales since the recession, reflecting increasing prices over the years. Constant dollar sales rose 12.1% from 2009 to 2013 compared with a 21.0% gain in current dollar terms. Some industries that had particularly strong sales volumes prior to the recession have not recovered to pre-recession levels. The decline in constant dollar sales in 2013 indicates that volumes decreased year-over-year; however, sales remained relatively flat in current dollar terms because of price increases.

<sup>1</sup> Data in this paper are not seasonally adjusted and represent annual figures, unless otherwise noted.

<sup>2</sup> 2007 is considered the pre-recession benchmark year for the purposes of this paper since the recession started in late 2008.

<sup>3</sup> All export data are domestic exports from Industry Canada's trade database online.

Chart 1  
Current and constant dollar manufacturing sales



**Source:** Statistics Canada. CANSIM tables 304-0014 and 377-0009.

A gain in exports also contributed to the rise in current dollar sales in 2013. Exports for the sector rose by 1.6% to \$275.5 billion due primarily to increased exports of wood (up \$2.5 billion or 26.3%) and chemical products (up \$2.1 billion or 7.3%). Increases were partially offset by decreased exports for the petroleum and coal product industry (down \$1.1 billion or 4.7%) and the primary metal industry (down \$933.9 million or 3.2%).

Gross domestic product (GDP) for the manufacturing sector declined in 2013 by 0.4% to \$168.0 billion.<sup>4</sup> The sector accounted for 10.6% of Canada's GDP in 2013, down slightly from the approximate 10.8% share it had over the previous three years. In 2007, prior to the recession, manufacturing GDP was \$186.2 billion, representing 12.7% of Canada's total GDP. Despite the decreased share in recent years, manufacturing continues to be one of Canada's largest economic sectors.

Capacity utilization in the manufacturing sector also decreased overall in 2013, down 1.3 percentage points to 80.1%. Capacity utilization indicates how effectively the factors of production, such as labour, capital and land are being used. It is the ratio between actual output produced and the potential output that could be produced if an operation is running at full capacity. After declining from a high of 83.7% in 2005 to a low of 71.4% in 2009, capacity utilization for manufacturing almost fully recovered to pre-recession levels in 2012 before dipping again in 2013.

<sup>4</sup> Based on chained 2007 dollars. GDP data are from table 379-0031 - Gross domestic product (GDP) at basic prices, by North American Industry Classification System (NAICS), monthly (dollars).



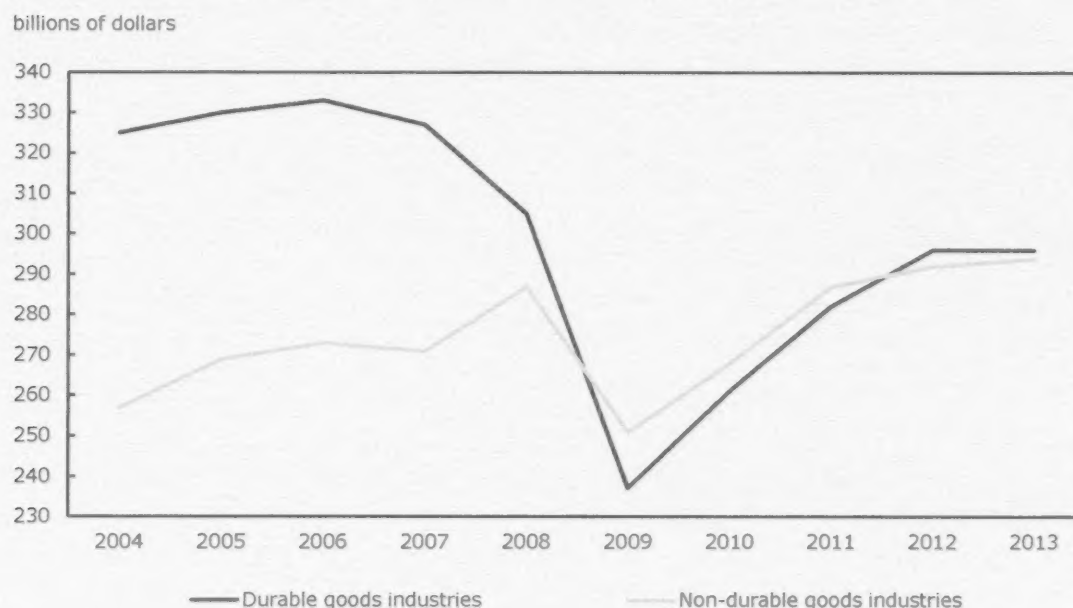
### 3 Manufacturing sales for non-durable goods industries outpace durable goods industries

In 2013 non-durable goods sales rose 0.5% to \$293.9 billion on gains in the food and chemical industries. These gains were partially offset by a decline in petroleum and coal product manufacturing. Sales of durable goods were essentially flat year-over-year with a 0.1% gain bringing them to \$296.5 billion. Large increases in wood and aerospace manufacturing were offset by declines in most other categories.

Historically, sales of non-durable goods trended upwards until the recession. In contrast, sales in the durable goods industries increased slightly in the early 2000s with slower growth than non-durable goods industries. Both categories dropped during the recession, specifically in 2009, with a 22.3% decline for durable goods industries and a 12.5% decrease for non-durable goods industries. Both have posted steady gains since then, but 2013 sales for durable goods industries were well below their pre-recession levels while sales for non-durable goods industries have fully recovered, and in 2013, exceeded their pre-recession levels.

Chart 2

Annual manufacturing sales for durable and non-durable goods industries



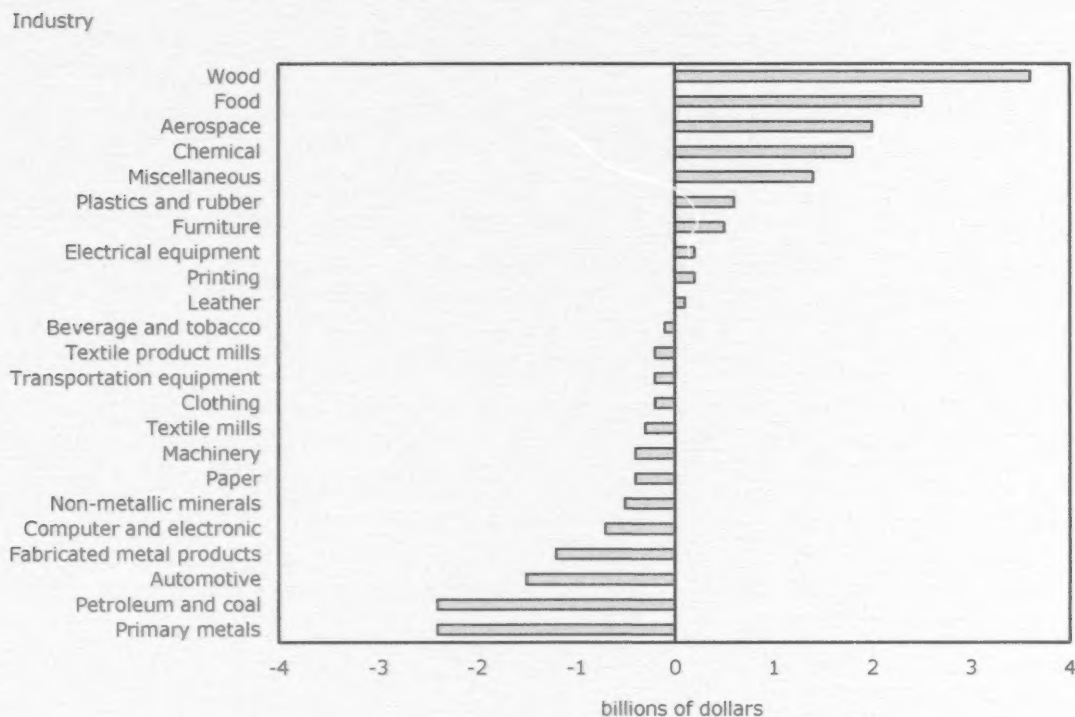
Source: Statistics Canada, CANSIM table 304-0014.

#### 4 Year-over-year gains in sales led by the wood product industry

Four industries accounted for over three-quarters of the total overall increases in 2013, namely the wood, food, aerospace product and parts, and chemical manufacturing industries.

Chart 3

Dollar change from 2012 by industry (billions of dollars)



**Source:** Statistics Canada, CANSIM table 304-0014.

The wood product industry had the largest increase in sales, gaining \$3.6 billion over 2012 to reach \$23.8 billion in 2013 (+17.8%). While the gain was mostly attributable to an increase in volumes, there was also a price increase of 3.4% according to the Industrial Product Price Index (IPPI).

The wood industry posted sales of \$35.8 billion in 2004, the highest on record.<sup>5</sup> Since that peak, sales steadily declined until 2009, primarily due to the pine beetle infestation in British Columbia, the softwood lumber dispute, and the recession of 2008-2009. The recession led to a decline in demand for wood products in the United States and had a major impact on the wood industry in Canada. However, since then, improved economic conditions and increased exports to the United States and China have contributed to higher sales for the Canadian wood products industry.

<sup>5</sup> Since the start of the series in 1992.

From 2009 to 2013, housing starts increased by 30.5% in Canada and by 66.9% in the United States<sup>6</sup>, contributing to increased demand for Canadian wood products. To meet greater demand, wood product exports to the U.S. rose by 56.4% over the same period to \$8.3 billion in 2013. Exports to China have also been on an upward trajectory. They have more than quadrupled since 2009 to \$1.5 billion in 2013 due to housing market stimulus in China. An important source of demand in China is the Chinese government's decision to implement a formal plan to move 250 million rural residents to newly constructed towns and cities by 2025.<sup>7</sup>

Consistent with the substantial rise in 2013 sales, the wood product industry also had double-digit growth in unfilled orders (up 14.8% to \$393.5 million) as well as the largest gain in capacity utilization in 2013 (up 5.6 percentage points to 86.3%) following a total gain in capacity utilization of 19.6 percentage points from 2009 to 2012.

The food manufacturing industry posted the second highest dollar increase in 2013. Current dollar sales rose \$2.5 billion to \$88.8 billion (+2.9%). The sub-industry with the largest gain was dairy product manufacturing, up \$1.8 billion (+12.0%) year-over-year. Food exports also increased 2.7% in 2013 to \$23.9 billion, due primarily to increased exports to the United States (+6.8%).

In contrast to most industries, food sales continued increasing through the recession. Sales of food products are more closely tied to population growth and less linked to the state of the overall economy.

In 2013, production<sup>8</sup> in the aerospace product and parts industry reached \$17.6 billion, a \$2.0 billion gain over 2012 (+13.1%). The aerospace industry achieved a record high of \$18.6 billion in 2008. After a decline of \$4.9 billion in 2009 and 2010, production almost returned to pre-recession levels by 2011. The advance in 2013 mainly reflected higher volumes of products built, mostly for export markets, although a 3.8% price gain also contributed to the increase. The aerospace product and parts manufacturing industry was among the top 10 largest export sectors in Canada in 2013 generating \$11.3 billion worth of exports, a 4.6% increase over 2012.

Concurrent with the increases in production and exports, unfilled orders for the aerospace industry also increased in 2013 (+31.0%).

Manufacturing sales in the chemical product industry advanced \$1.8 billion to \$47.4 billion in 2013 (+4.0%). The increase was partly attributed to higher factory volumes, but rising prices also played a role. The sub-industry responsible for most of the gain in sales was resin and synthetic rubber manufacturing. In 2013, sales levels for the chemical industry were 4.6% below the high of \$49.7 billion reached in 2005. Although they dropped to \$41.5 billion in 2009, sales have recovered and stabilized since then with the help of increasing prices. Total exports for the chemical industry also increased 7.3% to \$30.3 billion in 2013. This was Canada's second largest manufacturing industry in terms of exports in 2013.

Sales were also up considerably in 2013 for the miscellaneous manufacturing industry which posted a gain of \$1.4 billion (+12.8%). The miscellaneous category includes a variety of manufacturing activities not classified elsewhere, such as medical equipment and supplies manufacturing, jewellery and silverware manufacturing, and sporting and athletic goods manufacturing.

6. U.S. housing starts data are from the United States Census Bureau, *New Residential Construction - New Privately Owned Housing Units Started*, annual data.

7. Source: Johnson, Ian. June 15, 2013. *China's Great Uprooting: Moving 250 Million Into Cities*. The New York Times.

8. For the Monthly Survey of Manufacturing, production is published instead of sales for the aerospace product and parts industry and the shipbuilding industry because production measures economic activity in these industries better than sales.

## 5 Primary metal as well as petroleum and coal industries post lower year-over-year sales

The industries posting the largest declines in 2013 included primary metals, petroleum and coal products, fabricated metal products, and the automotive industry (the motor vehicle assembly and motor vehicle parts industries combined).<sup>9</sup> Aside from the primary metal industry, these industries posted declines in 2013 for the first time since 2009.

Manufacturing sales for the primary metal industry were down \$2.4 billion to \$43.4 billion in 2013 (-5.3%), well below the industry's recent high of \$53.8 billion in 2008. The decline mostly reflected lower prices. The average price of primary metals fell 5.6% from 2012 to 2013. Exports for this industry also decreased by 3.2%. The sub-industry mainly responsible for the overall decline in sales was non-ferrous metal (except aluminum) production and processing, which was down \$1.3 billion, followed by the iron and steel mills and ferro-alloy manufacturing sub-industry, which was down \$737.2 million.

Sales for the petroleum and coal product industry had reached a record high of \$85.1 billion in 2012, but declined to \$82.7 billion in 2013 (-2.8%). Average prices of petroleum and coal products for the year were up 1.9% indicating that lower volumes were largely responsible for the decline. This was the result of extended and unplanned shutdowns at several refineries in 2013. The decline in 2013 was the industry's first drop in sales since 2009 and only its second decline in more than a decade.

Total exports of petroleum and coal products declined 4.7% in 2013 to \$23.0 billion, consistent with the decrease in volumes of product sold. Lower exports to Europe were largely responsible with an 86.4% decline in exports to the United Kingdom alone. Over the past decade, exports to the UK have been volatile. In contrast to the overall decline in exports of petroleum and coal products, exports to the United States continued to increase, up 1.8% in 2013, following double-digit increases over most of the past 10 years. Exports to the United States accounted for over 90% of Canada's total exports of petroleum and coal products in 2013.

Sales for the automotive industry fell to \$76.7 billion in 2013 (-1.9%). The \$1.5 billion decline was largely attributable to lower volumes of product sold in 2013 as average prices increased slightly. Sales for the industry had reached a peak of \$108.2 billion in 1999 but saw declines in subsequent years starting well before the recession of 2008-2009. By 2009, sales had fallen over 50%. Despite some recovery since then, 2013 sales remained well below pre-recession levels.

As with sales, exports of motor vehicles and motor vehicle parts also declined in 2013 following increases in previous years. Total exports for these two sub-industries decreased by 0.9% primarily due to reduced exports to the United States.

In contrast to the decline in sales for the Canadian automotive industry, the industry grew in the United States in 2013. In fact, sales have more than doubled in the U.S. since 2009 (+107.0%) for the motor vehicle sub-industry alone (not including motor vehicle parts).<sup>10</sup> In comparison, the motor vehicle sub-industry in Canada has grown 57.2% since 2009. Furthermore, while light vehicle production (based on number of units) declined in Canada in 2013 (-3.4%), the United States continued to see an increase (+7.2%).<sup>11</sup> According to the Centre for Automotive Research, the auto industry in Canada is also attracting less investment.<sup>12</sup> And although employment for the automotive industry increased slightly in Canada in 2013 (+2.3%), it grew at a faster rate in the U.S. (+5.5%). The difference was also significant the previous year, from 2011 to 2012, with employment growing by 2.7% in Canada and by 7.8% in the U.S.<sup>13</sup>

<sup>9</sup> For the purposes of this paper, the automotive industry includes two sub-industries: motor vehicle manufacturing (NAICS 3361) and motor vehicle parts manufacturing (NAICS 3363).

<sup>10</sup> U.S. motor vehicle manufacturing data are from the United States Census Bureau. *Manufacturers' Shipments, Inventories and Orders* survey. Data for motor vehicles (NAICS 3361) includes the identification codes 36A, 36B, and 36C. Data for motor vehicle parts (36D and 36E) were not available.

<sup>11</sup> According to data from the DesRosiers Automotive Reports, Volume 27, Issue 2, January 31, 2014. *Table 2: Canadian Light Vehicle Production, and Table 3: U.S. Light Vehicle Production.*

<sup>12</sup> Source: Flaville, Dana. April 18, 2013. "Auto manufacturing in Canada in long-term decline, report warns". The Star.

<sup>13</sup> U.S. employment data are from the United States Department of Labor, Bureau of Labor Statistics. *Table B-1b. Employees on non farm payrolls by industry sector and selected industry detail, not seasonally adjusted.* Note: The sum of motor vehicles and motor vehicle parts was used.



Fabricated metal product sales declined \$1.2 billion to \$33.5 billion in 2013 (-3.4%) following a \$2.1 billion increase in 2012. The two sub-industries responsible for much of the decrease included coating, engraving, heat treating and allied activities as well as machine shops, turned product, and screw, nut and bolt manufacturing. The 2013 decline in sales reflected lower volumes of product sold by manufacturers as well as lower prices. Despite the decline in volumes, exports edged up 2.5%.

The highest sales level on record for the fabricated metal product industry was posted in 2008 at \$36.4 billion, despite the start of recession that year, but then sales dropped by 20.0% in 2009. Sales had almost recovered to pre-recession levels in 2012 prior to dipping again in 2013.

## 6 Seven provinces post gains in manufacturing sales in 2013

Higher sales were posted in 2013 by seven provinces with Alberta leading the way, followed by Saskatchewan and British Columbia.

Table 1  
Provincial sales

Province	2012	2013	Change from 2012 to 2013	
	millions of dollars		percent	millions of dollars
Newfoundland and Labrador	7,190	6,266	-12.8	-924
Prince Edward Island	1,303	1,456	11.8	153
Nova Scotia	10,537	9,482	-10.0	-1,056
New Brunswick	19,609	20,314	3.6	705
Quebec	139,130	137,280	-1.3	-1,850
Ontario	270,412	270,515	0.0	103
Manitoba	15,398	15,428	0.2	30
Saskatchewan	14,306	15,697	9.7	1,392
Alberta	71,675	73,793	3.0	2,118
British Columbia	38,914	40,118	3.1	1,204
Yukon	42	29	-31.3	-13
Northwest Territories including Nunavut <sup>1</sup>	20	24	21.1	4

1. Data are seasonally adjusted.

Source(s): Statistics Canada, CANSIM table 304-0015.

Alberta's gain was primarily due to increased sales in the chemical, petroleum and coal product, and wood product industries. Alberta's wood product industry saw a strong gain of 58.3% since 2011, outpacing Ontario's two-year increase of 12.4%. As a result, Alberta supplanted Ontario as the third largest manufacturer of wood products in 2013, behind British Columbia and Quebec. Alberta's share of Canada's total wood industry sales rose to 15.0% in 2013 while Ontario's share declined to 14.5% of Canada's total wood sales.

Manufacturers in Saskatchewan increased sales by 9.7% on the basis of higher sales of non-durable goods such as petroleum and coal products and food. Wood product manufacturing sales were responsible for the majority of the year-over-year gain in British Columbia. The industry posted an increase of 22.6% in 2013.

On the downside, sales declined in Quebec (-1.3%), Nova Scotia (-10.0%), and Newfoundland and Labrador (-12.8%). In all three provinces, the declines were concentrated in the non-durable goods industries in general. In Quebec, the petroleum and coal industry saw the largest year-over-year decrease. Quebec also posted lower sales of food (-5.1%) and primary metals (-4.7%). Quebec, however, did see a 13.0% increase in production<sup>8</sup> of aerospace product and parts, and an 18.7% gain in sales of wood products in 2013.

While Ontario's sales were essentially flat year-over-year, the province reported an increase of 10.6% in food manufacturing. However, the gain was tempered by a loss of 2.1% in the automotive industry and a decline of 5.5% in the petroleum and coal product industry.

## 7 Unfilled orders advance in 2013 on increases for transportation equipment

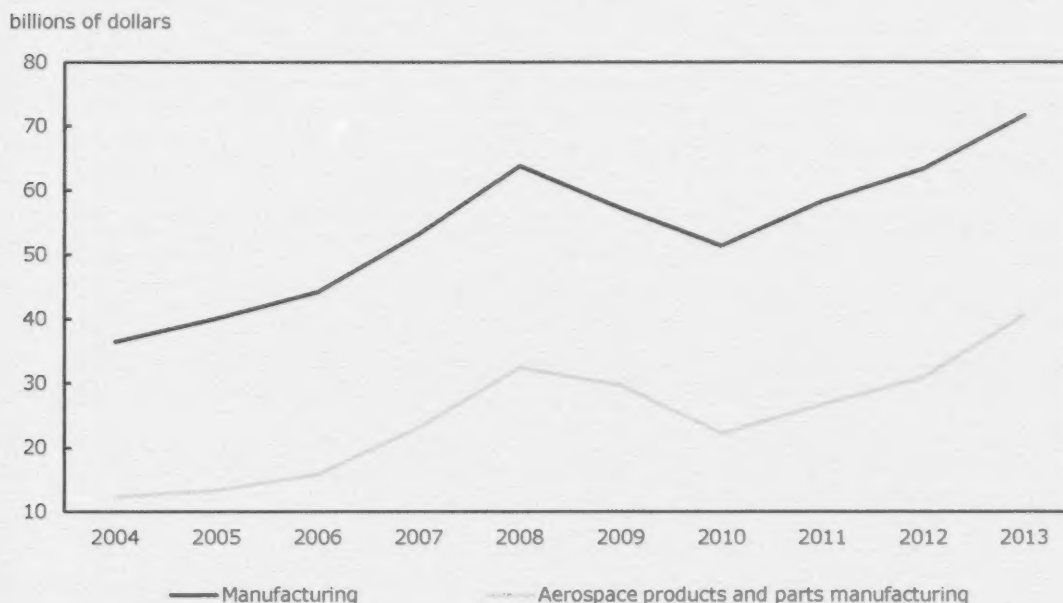
In 2013, unfilled orders<sup>14</sup> in the manufacturing sector rose 13.2% to \$71.7 billion, led by orders for transportation equipment. Unfilled orders for the aerospace product and parts industry increased 31.0% to \$40.7 billion. Unfilled orders can be defined as a stock of orders that may contribute to future sales, providing they are not cancelled.

Much of the gains seen in unfilled orders for transportation equipment over the last decade were driven by gains in the aerospace product and parts industry. Unfilled orders in the aerospace industry increased 228.7% over the past nine years from a low of \$12.4 billion in 2004. In 2004, aerospace unfilled orders represented 33.9% of total manufacturing unfilled orders. By the end of 2013, the share of aerospace unfilled orders out of total manufacturing unfilled orders had risen to 56.7%.

The fabricated metal product industry saw the largest dollar decline in unfilled orders in 2013 with an \$835.0 million reduction (-12.2%) after reaching a record high of \$6.8 billion in 2012. Aside from declines in 2009 and 2010, unfilled orders in this industry had been trending upwards since the early 2000s and continued the upward trend in 2011 and 2012. Despite the decline in 2013, unfilled orders were still well above pre-recession levels.

Unfilled orders, as well as inventories, are generally much lower for non-durable goods industries as compared with durable goods industries. This is due to the shorter production periods, shorter "shelf life", large household markets and well-established distribution networks for non-durable goods such as food, beverages, and refined petroleum products. Average monthly unfilled orders in 2013 for the non-durable goods industries stood at \$2.8 billion compared with \$69.0 billion for durable goods industries. Unfilled orders for non-durable goods industries were relatively flat year-over-year with a 0.5% gain, whereas durable goods industries posted an increase of 14.0%.

Chart 4  
Manufacturing unfilled orders



Source: Statistics Canada, CANSIM table 304-0014.

<sup>14</sup> Based on the average of estimated values at the end of each month.



## 8 Inventories also up year-over-year due to the petroleum and coal product industry and transportation equipment industry

Total inventories are composed of three stages of fabrication: raw materials, goods-in-process, and finished products. Increases in raw materials and goods-in-process may signal higher future production and sales by manufacturers. The interpretation or impact of higher finished products is somewhat ambiguous. They may arise from increased manufacturing production and anticipated future sales. On the other hand, increases in finished product inventories may reflect lower than expected sales or cancelled orders.<sup>15</sup>

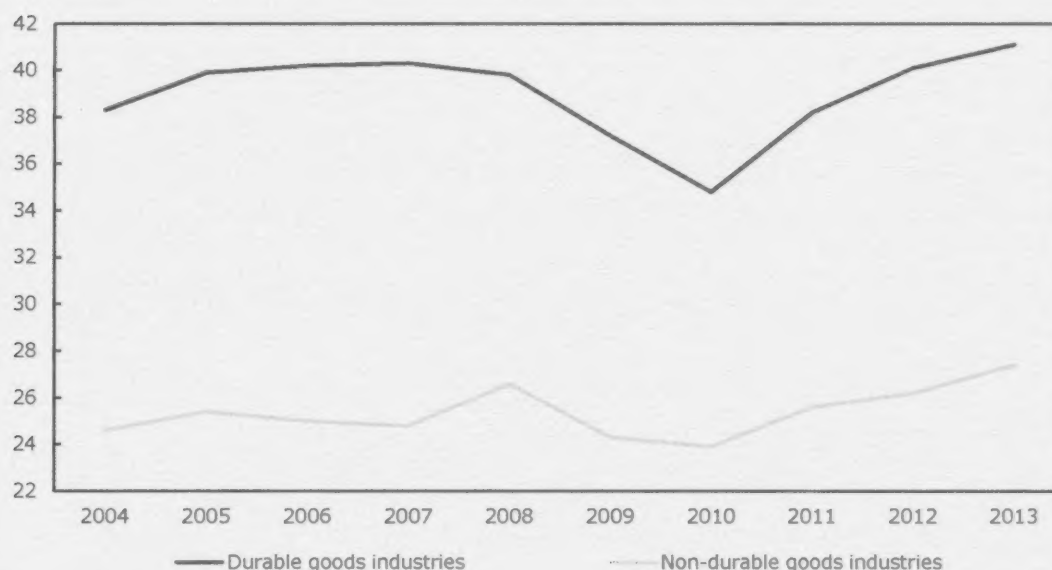
Canadian manufacturers held higher levels of inventories in 2013 compared with 2012. Total inventory levels<sup>14</sup> for the manufacturing sector increased 3.3% to \$68.5 billion in 2013. In addition, the monthly values of raw materials and goods in process rose throughout the course of the year. Raw materials were up 2.8%, goods-in-process rose 5.7%, and finished products increased 2.1%.

The largest dollar increase in inventories in 2013 was seen in the petroleum and coal product industry, which posted a gain of \$1.3 billion (+22.6%). Almost three-quarters of the increase were raw materials. Inventories also rose substantially in the transportation equipment industry, particularly the aerospace product and parts sub-industry, which posted a gain of \$1.1 billion (+18.0%). The gain was primarily due to increased goods-in-process.

While the aerospace product and parts industry posted increased production in 2013 in conjunction with higher inventories, the petroleum and coal product industry saw lower sales while posting higher inventories. In fact, 2013 marks the first time on record that annual sales decreased while inventories and prices increased in the petroleum and coal product industry. Sales, inventories, and prices for this industry tend to follow a similar pattern. However, this disconnect is consistent with the longer than usual refinery shutdowns that occurred in 2013.

Chart 5  
Manufacturing inventories

billions of dollars



Source: Statistics Canada, CANSIM table 304-0014.

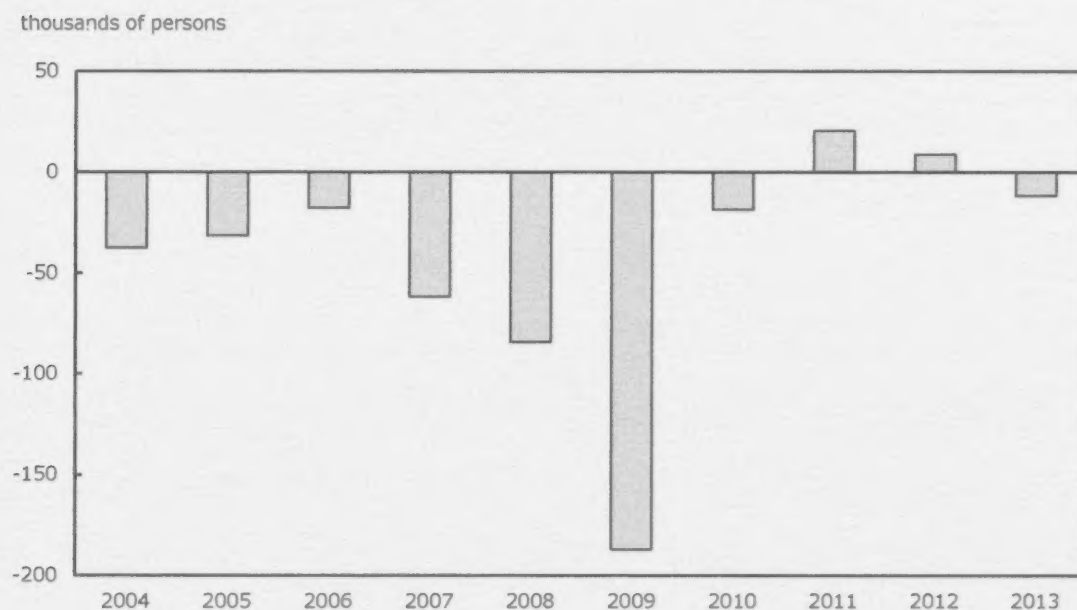
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## 9 Manufacturing employment down in 2013 following two years of gains

In 2013, the manufacturing sector employed 1.5 million people, according to the Survey of Employment, Payrolls and Hours (SEPH). This was down 11,700 persons<sup>16</sup> from 2012 (-0.8%). The decline in 2013 was the latest in a series of decreases since the turn of the millennium. The manufacturing sector lost over 500,000 jobs in the nine-year period from 2001 to 2010. The only two years seeing gains were 2011 and 2012, which brought some mild relief with an uptick of 29,100 jobs. However, the gains were not nearly enough to bring employment back to its pre-recession level.

Chart 6

Year-over-year change in number of manufacturing jobs



**Source:** Statistics Canada. CANSIM table 281-0024.

The largest decreases in manufacturing jobs in 2013 were in Quebec and Ontario. Quebec lost 11,200 employees while Ontario lost 4,000 employees. These declines were partially offset by smaller gains in employment in Saskatchewan (+1,800 employees) and Alberta (+2,000 employees). Saskatchewan has posted increases for three years in a row while manufacturing employment in Alberta has risen for the last four years.

Quebec recorded employment declines in 18 of 21 industries in 2013, resulting in an overall net loss of 11,200 manufacturing employees, as mentioned earlier. The sector employed a total of 398,600 people in 2013 which represented 26.8% of Canada's manufacturing jobs.

The two largest manufacturing industries in Quebec, in terms of employment in 2013, were food manufacturing, with 13.8% of the province's total manufacturing employees, and fabricated metal product manufacturing, representing 10.1% of total employees.

In 2013, the manufacturing sector in Ontario employed 656,200 persons, down 4,000 from 2012. In 2013, 44.2% of Canada's manufacturing jobs were in Ontario.

<sup>16</sup> All employment data rounded to the nearest hundred.

Manufacturing sales in Ontario remained flat year-over-year in 2013 despite the small decline in employment. The largest declines were in the printing and related support activities industry (-2,500 persons), and computer and electronic product manufacturing (-2,300 persons). The losses were partially offset by gains in other industries.

Manufacturing jobs in Ontario had been on the decline for almost a decade, posting a loss of nearly 279,000 jobs (-30.2%) from 2001 to 2010. Employment then stabilized from 2011 to 2013, but 2013 levels were still 17.7% below the pre-recession level of 2007.

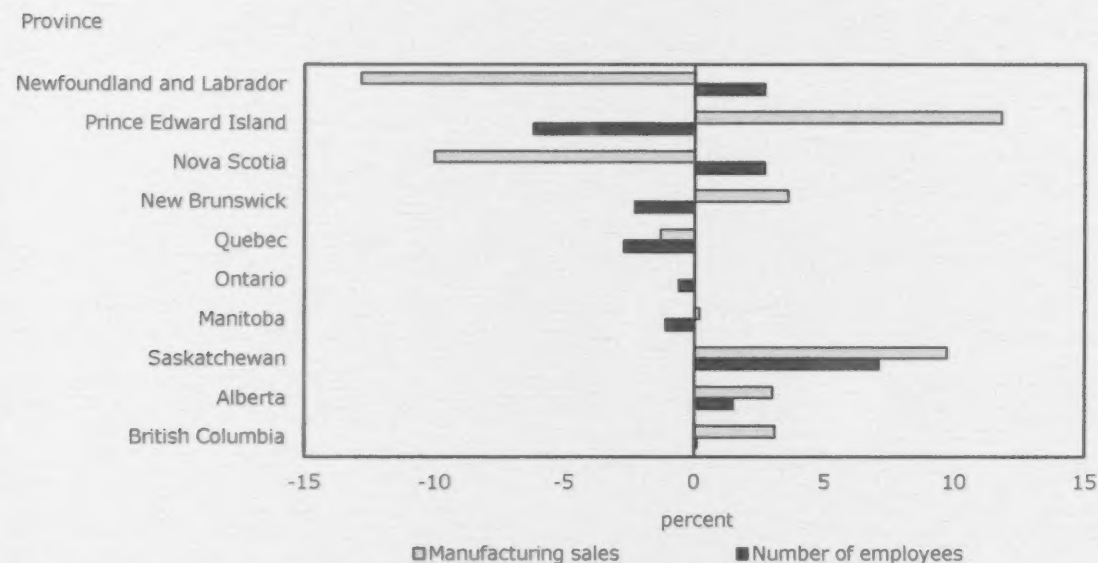
In 2013, the manufacturing sector in Alberta gained almost 2,000 jobs bringing the total number of employees in the sector to 135,600. Alberta's largest increase in employment occurred in the wood product manufacturing industry, where 1,400 employees were added in 2013, following a gain of almost 1,700 employees in 2012. Alberta also experienced a 22.5% increase in sales from this industry in 2013, which coincided with the rise in employment.

The manufacturing sector in Saskatchewan added almost 1,900 employees in 2013 bringing the total up to 28,000 jobs. The machinery industry, which was Saskatchewan's largest manufacturing employer in 2013, added 900 jobs while also posting a 3.6% gain in sales. The wood product industry in Saskatchewan added 600 employees in 2013 which coincided with a 25.6% increase in wood product sales.

For some other provinces, movements in 2013 employment and sales levels did not go hand in hand. While the gains were smaller in absolute terms, Newfoundland and Labrador, as well as Nova Scotia, both posted increases in employment in 2013 while seeing declines in manufacturing sales. Conversely, Prince Edward Island and New Brunswick saw large decreases in employment levels, in percentage terms, while posting large percentage increases in manufacturing sales.

Chart 7

Percent change in manufacturing sales and employment levels from 2012 to 2013 by province



Source: Statistics Canada, CANSIM tables 304-0015 and 281-0024.

## 10 Labour productivity and compensation increase year-over-year

In 2013 labour productivity grew in all goods-producing sectors in Canada except for the construction sector. Labour productivity for the manufacturing sector increased 0.7% in 2013 following annual increases every year since 2009. The 2013 increase can be attributed to the fact that hours worked (-1.1%) decreased at a faster rate than GDP (-0.4%). The small year-over-year decline in annual GDP reflected lower levels in the first half of 2013 and stronger monthly gains in three of the last six months of the year. Labour productivity also rose throughout the year.

Total compensation per hour worked in the manufacturing sector also saw a year-over-year increase of 2.3% in 2013. Since the recession of 2008-2009, compensation (+9.9%) has increased at a similar rate to labour productivity (+8.2%). At the same time, the 9.5% growth in GDP far outpaced the 1.2% increase in hours worked, which is consistent with the gains seen in both labour productivity and capacity utilization (+10.0 percentage points) from 2009 to 2012.

## 11 Capital expenditures up while operating profits down in 2013

Capital expenditures in manufacturing edged up 0.5% to \$18.1 billion in 2013 following gains of 12.8% in 2011 and 1.9% in 2012. The recent slowdown in the growth of capital expenditures follows a pattern similar to the declining sales gains seen in the manufacturing sector.

Despite the relatively small year-over-year increase in capital spending overall, expenditures for some industries saw major shifts in 2013. Expenditures in paper manufacturing, petroleum and coal product manufacturing, and plastics and rubber products manufacturing saw the largest dollar increases in capital expenditures, ranging between about \$150 million and \$250 million. In contrast, primary metal manufacturing posted a decrease of \$501.9 million. The decline follows substantial increases recorded in the previous three years, including a \$980.2 million increase in 2012.

While operating profits for the economy as a whole posted a 4.4% increase in 2013, manufacturing profits fell 6.9% to \$48.4 billion, in current dollar terms. Manufacturing profits also declined 10.8% in 2012. Despite these declines, the 2013 level exceeded pre-recession highs thanks to the large increases posted in 2010 and 2011.

## 12 Conclusion

As summarized in table 2, results for various key economic indicators in 2013 were mixed. While the manufacturing sector has recovered from the recession according to some indicators, other results were not as positive. Sales, from a current dollar perspective, were essentially flat year-over-year and were only slightly below pre-recession levels. However, from a constant dollar perspective, sales were down in 2013 and remained well below pre-recession levels. GDP, employment, and capacity utilization were down in 2013 and have not fully recovered from the recession. Operating profits were also down slightly in 2013 but they continued to exceed 2007 levels. Conversely, while domestic exports and capital expenditures edged up in 2013, they remained well below pre-recession levels. The most positive indicators overall for the manufacturing sector were unfilled orders, labour productivity, and compensation, which all saw increases in 2013 and have also fully recovered from the recession of 2008-2009.



Table 2  
Summary of economic indicators for the manufacturing sector

Economic Indicator	2013	2013 versus pre-recession level (indexed to 2007) <sup>1</sup>
Sales - Current Dollar	flat	slightly below
Sales - Constant Dollar	down	below
Domestic Exports	up	below
GDP	down	below
Unfilled Orders	up	above
Inventories	up	above
Employment	down slightly	below
Labour Productivity	up	above
Total Compensation	up	above
Capacity Utilization	down	below
Operating Profits	down	above
Capital Expenditures	up	below

1. The data were indexed such that the 2007 level equals 100.

Source(s): Statistics Canada, CANSIM tables 304-0014, 377-0009, 379-0031, 281-0024, 383-0012, 028-0002, 187-0001, 029-0009, and Industry Canada's trade data online ([www.ic.gc.ca/eic/site/tdo-dcd.nsf/eng/home](http://www.ic.gc.ca/eic/site/tdo-dcd.nsf/eng/home)).

### 13 References and data sources

Canada Mortgage and Housing Corporation. Table 027-0001 - Canada Mortgage and Housing Corporation, housing starts, under construction and completions in centres 10,000 and over, Canada, provinces, selected census metropolitan areas, monthly (units), CANSIM (database). Last updated July 22, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0270001&paSer=&pattern=&stByVal=1&p1=1&p2=49&tabMode=dataTable&csid=> (accessed July 25, 2014).

DesRosiers, Dennis. January 31, 2014. *DesRosiers Automotive Reports, Volume 27, Issue 2*. DesRosiers Automotive Consultants Inc.

DesRosiers, Dennis. June 2013. *DesRosiers Automotive Yearbook, 2013 Edition*. DesRosiers Automotive Consultants Inc.

Flavelle, Dana. April 18, 2013. *Auto manufacturing in Canada in long-term decline, report warns*. The Star. Available at [http://www.thestar.com/business/2013/04/18/auto\\_manufacturing\\_in\\_canada\\_in\\_longterm\\_decline\\_report\\_warns.html](http://www.thestar.com/business/2013/04/18/auto_manufacturing_in_canada_in_longterm_decline_report_warns.html) (accessed August 13, 2014).

Industry Canada. *Trade database online* (database). Available at <http://www.ic.gc.ca/eic/site/tdo-dcd.nsf/eng/home> (accessed September 15, 2014).

Johnson, Ian. June 15, 2013. *China's Great Uprooting: Moving 250 Million Into Cities*. The New York Times. Available at <http://www.nytimes.com/2013/06/16/world/asia/chinas-great-uprooting-moving-250-million-into-cities.html?page=wanted=all&r=0> (accessed April 14, 2014).

Statistics Canada. Table 028-0002- Industrial capacity utilization rates, by North American Industry Classification System (NAICS), quarterly (percent), CANSIM (database). Last updated June 11, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0280002&paSer=&pattern=&stByVal=1&p1=1&p2=49&tabMode=dataTable&csid=> (accessed June 23, 2014).

Statistics Canada. Table 029-0009- Capital and repair expenditures, industry sectors 31-33, manufacturing, annual (dollars), CANSIM (database). Last updated February 25, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0290009&paSer=&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=> (accessed June 10, 2014).

Statistics Canada. Table 187-0001- Quarterly balance sheet and income statement, by North American Industry Classification System (NAICS), quarterly (dollars unless otherwise noted), CANSIM (database). Last updated May 26, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=1870001&paSer=&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=> (accessed June 10, 2014).

Statistics Canada. Table 281-0023- Employment (SEPH), unadjusted for seasonal variation, by type of employee for selected industries classified using the North American Industry Classification System (NAICS), monthly (persons), CANSIM (database). Last updated July 24, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=2810023&paSer=&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=> (accessed July 25, 2014).

Statistics Canada. Table 281-0024- Employment (SEPH), unadjusted for seasonal variation, by type of employee for selected industries classified using the North American Industry Classification System (NAICS), annual (persons), CANSIM (database). Last updated March 28, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=2810024&paSer=&pattern=&stByVal=1&p1=1&p2=49&tabMode=dataTable&csid=> (accessed July 25, 2014).

Statistics Canada. Table 304-0014- Manufacturers' sales, inventories, orders and inventory to sales ratios, by North American Industry Classification System (NAICS), Canada, monthly (dollars unless otherwise noted), CANSIM (database). Last updated July 15, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3040014&paSer=&pattern=&stByVal=1&p1=1&p2=50&tabMode=dataTable&csid=> (accessed July 25, 2014).

Statistics Canada. Table 304-0015- Manufacturing sales, by North American Industry Classification System (NAICS) and province, monthly (dollars), CANSIM (database). Last updated July 15, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3040015&paSer=&pattern=&stByVal=1&p1=1&p2=49&tabMode=dataTable&csid=> (accessed July 25, 2014).

Statistics Canada. Table 329-0077- Industrial product price indexes, by North American Industry Classification System (NAICS), monthly (index, 2010=100), CANSIM (database). Last updated July 21, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3290077&paSer=&pattern=&stByVal=1&p1=1&p2=49&tabMode=dataTable&csid=> (accessed July 25, 2014).

Statistics Canada. Table 377-0009- Real manufacturing sales, orders, inventory owned and inventory to sales ratio (table). CANSIM (database). Last updated July 15, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3770009&paSer=&pattern=&stByVal=1&p1=1&p2=49&tabMode=dataTable&csid=> (accessed July 30, 2014).

Statistics Canada. Table 379-0031- Gross domestic product (GDP) at basic prices, by North American Industry Classification System (NAICS), monthly (dollars), CANSIM (database). Last updated June 27, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3790031&paSer=&pattern=&stByVal=1&p1=1&p2=49&tabMode=dataTable&csid=> (accessed July 25, 2014).

Statistics Canada. Table 383-0012- Indexes of labour productivity and related variables, by North American Industry Classification System (NAICS), seasonally adjusted, quarterly (index, 2007=100), CANSIM (database). Last updated September 4, 2014. Available at <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3830012&paSer=&pattern=&stByVal=1&p1=1&p2=49&tabMode=dataTable&csid=> (accessed September 15, 2014).



United States Census Bureau. *New Residential Construction -New Privately Owned Housing Units Started, annual data* (table). Available at [http://www.census.gov/construction/nrc/historical\\_data/](http://www.census.gov/construction/nrc/historical_data/) (accessed June 20, 2014).

United States Census Bureau. *Manufacturers' Shipments, Inventories and Orders survey* (database). Available at [www.census.gov/manufacturing/m3/](http://www.census.gov/manufacturing/m3/) (accessed July 24, 2014).

United States Department of Labor, Bureau of Labor Statistics. *Table B-1b. Employees on nonfarm payrolls by industry sector and selected industry detail, not seasonally adjusted* (table). Available at <http://www.bls.gov/opub/ee/archive.htm> (accessed August 8, 2014).